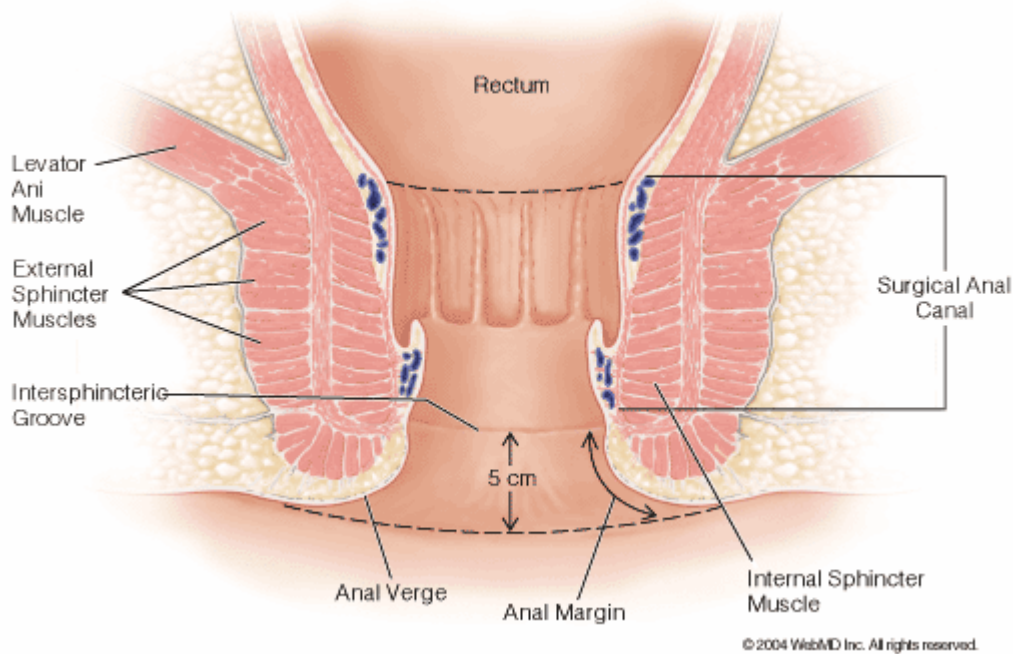


HEMORRHOIDS



Introduction

hemorrhoids are fibrovascular cushions lining the anal canal

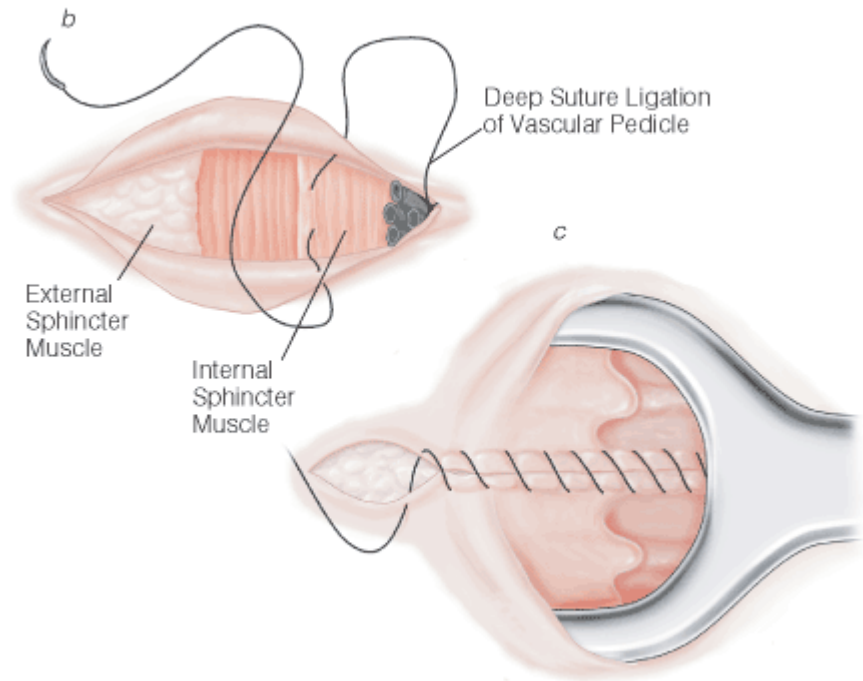
- MYTH 1: hemorrhoids are abnormal, or pathological, structures
 - hemorrhoids are part of the normal anal canal anatomy and may serve to maintain continence; during Val Salva, they engorge and close off the anal canal to prevent anal leakage
 - this is important to take into consideration because “surgical removal may result in varying degrees of incontinence particularly in individuals with marginal preoperative control” (ASCRS)
- MYTH 2: hemorrhoids are a result/manifestation of portal hypertension
 - hemorrhoids are unrelated to the superior hemorrhoidal artery and vein (which drain into the IMV → splenic vein → portal vein), to the portal vein, or to portal hypertension
 - portosystemic decompression of the superior hemorrhoidal vein occurs via the middle and inferior hemorrhoidal veins; internal hemorrhoids arise from the superior (internal) rectal plexus
 - anorectal varices may exist in cirrhotics, which may RARELY be a cause of lower GI bleed (1 of 72 patients [Chawla, et al, *Gut*, 1991], 2 of 309 patients [Wilson, *Arch Surg*, 1979], 2 of 100 patients [Hosking, *Lancet*, 1989]), but NOT of hemorrhoidal bleeding
 - therefore, realize that the majority of painless outlet bleeding, even in cirrhotics, is due to hemorrhoids

- general anatomy of the anal canal
 - begins a few cm proximal to the dentate line (transition from columnar rectal epithelium to transitional epithelium) and terminates at the anal verge (beginning of true stratified squamous epithelium)
 - dentate line is the transition between transitional epithelium to squamous epithelium and the location of anal crypts
 - autonomic innervation to upper anal canal; somatic innervation to anoderm

Internal Hemorrhoids

- develop with straining, which causes loss of attachment to underlying rectal wall (prolapse)
- with engorgement, overlying mucosa becomes friable and area becomes more vascular (bleeding);
 - most common cause of rectal bleeding
- classic locations: right anterior (11 o'clock), right posterior (7 o'clock), left lateral (3 o'clock)
- classification is BY HISTORY, NOT BY PHYSICAL EXAM:
 - Grade I: painless bleeding
 - Grade II: prolapse, spontaneous reduction
 - Grade III: prolapse, manual reduction
 - Grade IV: incarceration
- symptoms are generally progressive (bleeding first)
- classification is key to treatment: Grade I-II treated non-operatively, Grade III-IV treated surgically
- non-operative treatment begins with attempts to correct constipation (increased dietary fiber, stool softeners, bulking agents), Sitz baths for symptomatic relief
- office-based procedures may be performed (rubber band ligation, infrared photocoagulation, sclerotherapy)
- banding is successful for 66-75% of patients with Grade I-II hemorrhoids and is superior to other modalities in patients with Grades I-III hemorrhoids; patients treated with other modalities are more likely to require further treatment (MacRae, et al, *Dis Colon Rectum*, 1995)
 - grasp the hemorrhoid to be banded with forceps; if pain is felt, advance further proximally or pain will be felt after banding;
 - complications include bleeding, pain, thrombosis, and perineal sepsis (significant pain, fever, and dysuria – life-threatening!)
- infrared coagulation is best suited for patients who fail banding or who have hemorrhoids that are too small to be banded and involves three applications of 1-1.5 seconds to the apex of each treated hemorrhoid
 - coagulation is less effective in treating large amounts of tissue
- sclerotherapy involves injection of sclerosing agents (phenol in oil, sodium morrhuate, quinine urea) into the apex of each hemorrhoid, leading to decreased vascularity and fibrosis, fixing the hemorrhoid to the rectal wall
- hemorrhoidectomy is performed for Grade III-IV; the open (Milligan Morgan) technique is utilized in the U.K. while the closed (Ferguson) technique is more common in the U.S.

- bleeding within the first 12-24 hours represents a technical error and requires a return to the OR
- delayed bleeding (5-10 d) results from sloughing of the eschar and generally is minimal



External Hemorrhoids

- asymptomatic unless thrombosed; do not require treatment unless symptomatic
- presentation is with acute, constant anal pain; often report feeling like they are “sitting on a tender marble”
- physical exam will reveal a purple mass at the anal verge
- treatment is dependent on duration of symptoms at time of presentation; treat operatively during the first 24-72 hours of onset (pain increasing) and non-operatively afterwards (pain decreasing)
- surgical treatment involves EXCISION under local; incision and drainage leads to rethrombosis

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